

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: BADGER POND	Lake Area (ha): 4.73
Town: BELMONT	Maximum depth (m): 3.3
County: Belknap	Mean depth (m): 1.5
River Basin: Merrimack	Volume (m ³): 70500
Latitude: 43°27'06" N	Relative depth: 1.4
Longitude: 71°28'01" W	Shore configuration: 2.46
Elevation (ft): 570	Areal water load (m/yr): 378.0
Shore length (m): 1900	Flushing rate (yr ⁻¹): 254.0
Watershed area (ha): 3910.9	P retention coeff.: 0.02
% watershed ponded: 1.2	Lake type: artificial

BIOLOGICAL:

		12 January 1993	23 July 1992
DOM. PHYTOPLANKTON (% TOTAL)	#1	SYNEDRA 75%	MALLOMONAS 25%
	#2		CERATIUM 20%
	#3		DINOBRYON 20%
PHYTOPLANKTON ABUNDANCE (cells/mL)			1285
CHLOROPHYLL-A (µg/L)			14.10
DOM. ZOOPLANKTON (% TOTAL)	#1	SYNCHAETA 94%	SYNCHAETA 29%
	#2		NAUPLIUS LARVA 19%
	#3		POLYARTHRA 16%
ROTIFERS/LITER		100	937
MICROCRUSTACEA/LITER		<1	294
ZOOPLANKTON ABUNDANCE (#/L)		100	1406
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			1.5
BOTTOM DISSOLVED OXYGEN (mg/L)		14.5	0.2
BACTERIA (E. coli, #/100 ml)	#1		4
	#2		1
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 1.8
Hypolimnion volume (m³): None
Anoxic volume (m³): 2900

CHEMICAL:

Lake: BADGER POND

Town: BELMONT

	12 January 1993		23 July 1992		
DEPTH (m)	1.5		1.0		2.0
pH (units)	6.5		6.8		6.6
A.N.C. (Alkalinity)	5.9		10.1		10.2
NITRATE NITROGEN	0.15		< 0.02		0.04
TOTAL KJELDAHL NITROGEN	0.18				
TOTAL PHOSPHORUS	0.012		0.027		0.028
CONDUCTIVITY (μ mhos/cm)	76.5		69.2		69.2
APPARENT COLOR (cpu)	24		100		120
MAGNESIUM			1.13		
CALCIUM			3.7		
SODIUM			7.3		
POTASSIUM			0.83		
CHLORIDE	13		12		12
SULFATE	7		3		3
TN : TP	28				
CALCITE SATURATION INDEX			2.9		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1992

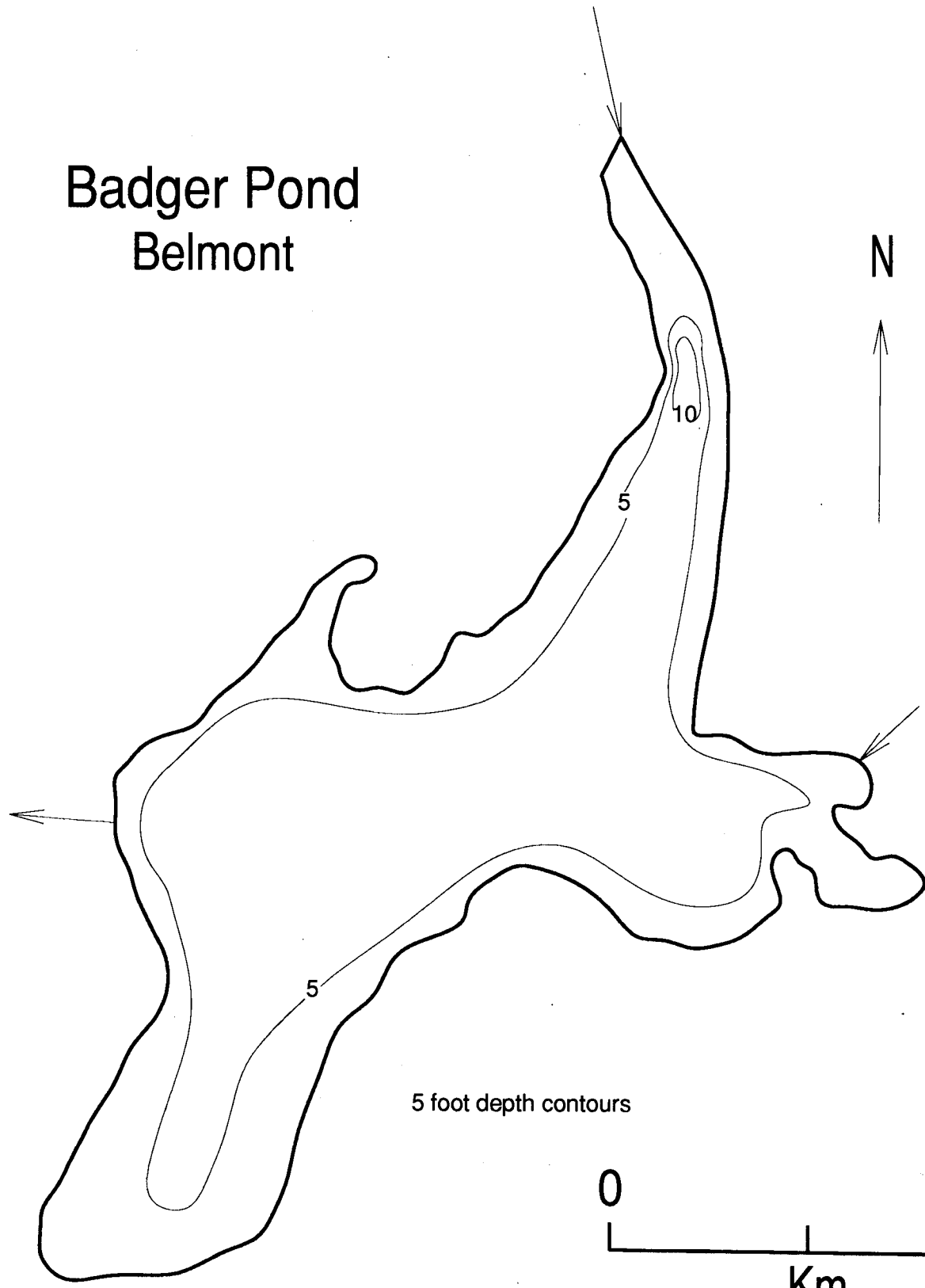
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	5	3	12	Eutro.

COMMENTS:

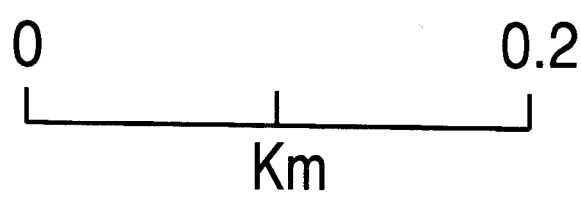
1. No access; canoe was portaged across private land.
2. Cows were observed near the pond.
3. Beaver lodge was present.
4. Dominant genera of wholewater phytoplankton were Microcystis (30%), Cryptomonas (25%) and Chroomonas (25%).

Badger Pond
Belmont

N



5 foot depth contours



FIELD DATA SHEET

LAKE: BADGER POND	TOWN: BELMONT
DATE: 07/23/92	WEATHER: RAIN

LAKE: BADGER POND	TOWN: BELMONT
DATE: 07/23/92	WEATHER: RAIN

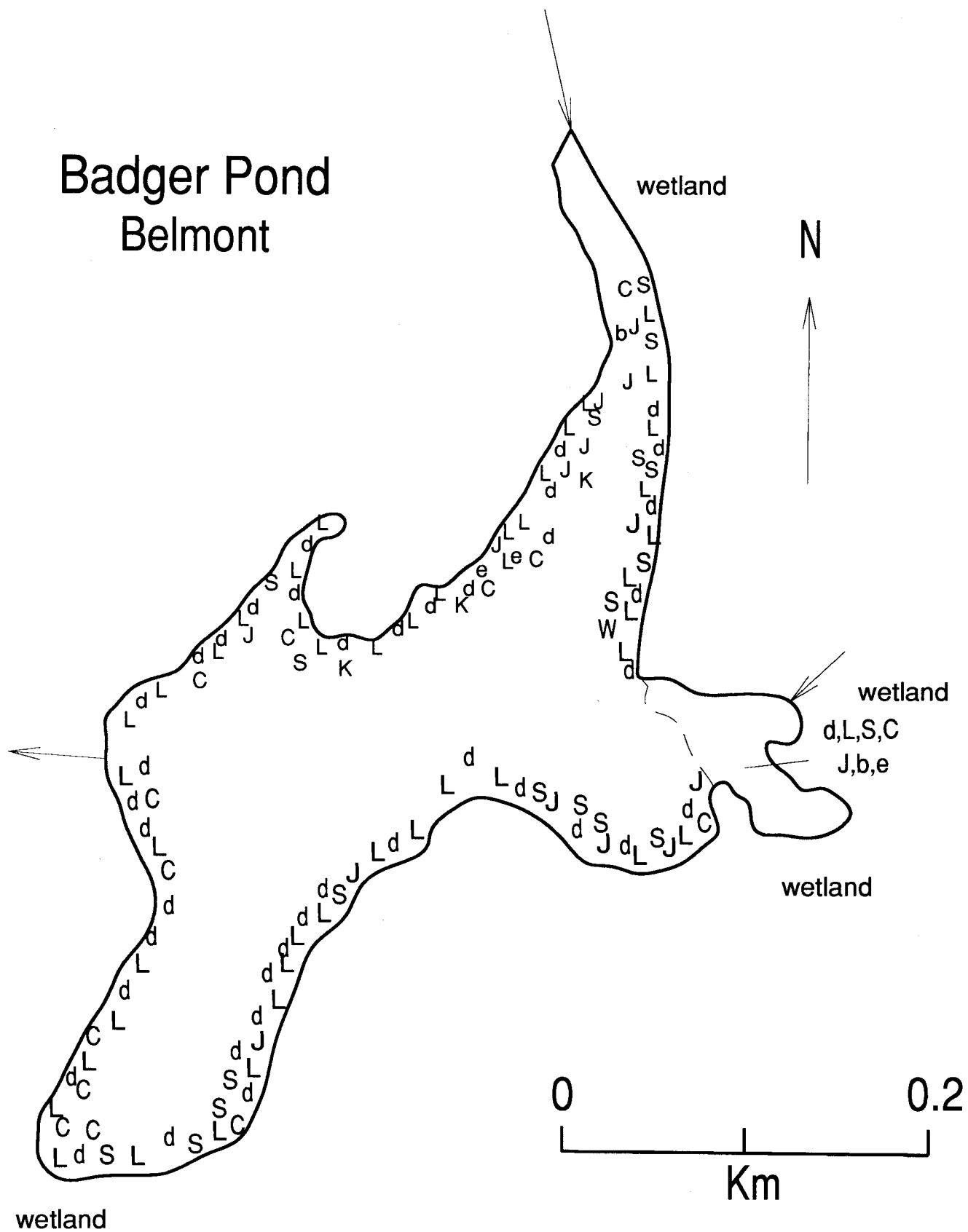
[illegible]

SECCHI DISK (m):	1.5	COMMENTS:
BOTTOM DEPTH (m):	2.7	
TIME:	1130	
*Dissolved oxygen values are in mg/L		

SECCHI DISK (m):	1.5	COMMENTS:
BOTTOM DEPTH (m):	2.7	
TIME:	1130	
*Dissolved oxygen values are in mg/L		

SECCHI DISK (m):	1.5	COMMENTS:
BOTTOM DEPTH (m):	2.7	
TIME:	1130	
*Dissolved oxygen values are in mg/L		

Belmont



[illegible]